

Abstract Submitted
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Multi-jet studies at CMS in LHC SUVADEEP BOSE, Tata Institute of Fundamental Research, CMS COLLABORATION — Prospects of QCD studies with multi-jet events at the CMS experiment at the Large hadron Collider are presented. Kinematic distributions of 3-jet and 4-jet events reveal the vector nature of gluon and gluon self coupling which are essential features of QCD. Monte Carlo simulations at 10 TeV of proton-proton center of mass energy are used to study the selection of the multi-jet samples and to measure the various multi-jet kinematic and topological distributions involving corrections due to detector effects. The various sources of systematic uncertainties are examined. For three and four jet events, the kinematic and topological variables discussed are the energy fractions carried by the leading jets and the angles between the planes containing the jets.

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